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IN THE CLAIMS

This listing of claims replaces all prior versions and listings of the claims in this application:

Claims 1-14 (Cancelled).

15. (Previously Presented) A recombinant *Drosophila melanogaster* kinase characterized by:

remaining stable during synthesis of nucleoside monophosphate in the absence of a stabilizing SH reagent and a stabilizing protein,

accepting all natural deoxynucleosides, and

being obtained by a method comprising:

isolating the coding sequence of the recombinant kinase from *Drosophila melanogaster*, said coding sequence comprising the nucleic acid sequence of SEQ ID NO: 1;

cloning said coding sequence into an expression vector under the control of an inducible promoter for *E. coli*,

transforming the expression vector in an *E. coli* host strain, and

expressing the *Drosophila melanogaster* kinase in *E. coli* cells by induction.

16. (Previously Presented) The recombinant kinase of claim 15 wherein the recombinant kinase retains over 90% of its initial activity to phosphorylate natural deoxynucleosides, after incubation in a 50 mM Tris pH 7.5 and 2.5 mM $MgCl_2$ solution at 37°C for 30 minutes.

17. (Previously Presented) The recombinant kinase of claim 15 further characterized by having a specific activity of at least 20 U/mg (1U = 1 µmol/min) for all natural deoxynucleosides.

18. (Currently Amended) The recombinant kinase of claim 15 further characterized by having a specificity constant $\underline{k_c/K_m}$ of >10,000 $M^{-1}s^{-1}$ for all natural deoxynucleosides.

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